

### **DETAILED ACTION**

1. The Action is responsive to Applicants' Amendment filed December 3, 2007.
2. It is acknowledged amendments were made to claims 1, 4, 6, 8, 11, 15, 17, 21, 27 and 30-31, cancellations of claims 3, 5, 12-14 and 28-29 and new additions of claims 32-38, in the Amendment.
3. After a thorough search and examination of the present application, and in light of the following:  
prior art made of record;  
an Examiner's Amendments made February 29, 2008 in which the Examiner was authorized to amend claims 1-2, 21-22 and 31-33; and  
an update search on prior art conducted in domains (EAST, NPL-ACM, Google, NPL-IEEE, etc);  
**Claims 1, 4, 6-11, 15-21, 23-27, 30-32 and 34-38 (renumbered to 1-28) are allowed.**

#### ***Examiner's Amendments***

4. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee. Authorization for this Examiner's Amendments, listed below was given on February 25 and 28, 2008 in a telephone interview and a communication with Mr. Garth D. Richmond (Registration Number: 43,044).

**4.1.** Please amend claims 1-2, 21-22 and 31-33 as follows:

1. (Currently amended) A method comprising:

identifying a potential stopword in a query based on a list of stopwords;

generating a first set of context data based on the query;

generating at least one second set of context data based on a version of the query in which the potential stopword has been removed;

comparing the sets at least one second set of context data to the first set of context data; ~~and~~

classifying the potential stopword either as an actual stopword or a non-stopword based on the comparing; and

rewriting the query to remove the actual stopword from the query.

2. (cancelled)

21. (Currently amended) A computer implemented system ~~implemented within one or more computer devices~~, comprising:

one or more computer devices including:

a parser component configured to receive a search query and identify potential stopwords in the search query;

a context generation component to generate a first set of context data based

on the search query and at least one second set of context data based on the search query dissociated from one or more of the potential stopwords; and

a comparator component to compare the at least one second set of context data to the first set of context data to determine those of the potential stopwords that are actual stopwords and those of the potential stopwords that are non-stopwords,

wherein, when the comparator determines that one or more of the potential stopwords are actual stopwords, the search query is rewritten to a form that does not include the one or more actual stopwords.

22. (Canceled)

31. (Currently amended) A computer implemented document retrieval system comprising:

one or more computer devices to implement a search engine configured to:

receive a user search query,

receive rewritten versions of the search query that exclude stopwords from the user search query, and

perform a search of a document index based on the user search query and the rewritten versions of the search query; and

a stopword detection component including: \_\_\_\_\_

a parser component configured to receive the user search query and identify potential stopwords in the search query;

a context generation component to generate a first set of context data based on the search query and at least one second set of context data based on the search query dissociated from one or more of the potential stopwords; and

a comparator component to compare the at least one second set of context data and the first set of context data to determine which of the potential stopwords are actual stopwords to be removed and which of the potential stopwords are non-stopwords to be included in at least one of the rewritten versions of the search query.

32. (Currently Amended) A method comprising:

receiving a search query, the search query including a plurality of terms; identifying one term in the plurality of terms as a potential stopword based on a list of stopwords;

performing a first search using the search query to identify a first group of documents;

performing a second search using the search query with the identified one term removed to identify a second group of documents;

determining whether the first group of documents is substantially similar to the second group of documents;

classifying the identified one term as a stopword when the first group of

documents are determined to be substantially similar to  
and the second group of documents; and

classifying the identified one term as a non-stopword when the first group of

documents are determined not to be substantially similar  
and

to the second group of documents;

submitting the search query to a search engine when the first group of documents are determined not to be substantially similar to the second group of documents; and submitting, to the search engine, the search query with the identified one term removed when the first group of documents are determined to be substantially similar to the second group of documents.

33. (Canceled)

#### ***Reasons for Allowance***

5. The following is the Examiner's statement of reasons for allowance:

In the Examiner's Office Action, dated August 1, 2007, the non-Final Rejection under 35 U.S.C. § 103 (a) rejections was made mainly based on the reference of Bode et al.: "TEXT SEARCH ORDERED ALONG ONE OR MORE DIMENSIONS", hereafter "Bode", U.S. Patent Application 2003/0115187, filed December 17, 2001 and published June 19, 2003; and in view of McGreevy: "SYSTEM, METHOD AND APPARATUS FOR CONDUCTING A PHRASE SEARCH", U.S. Patent Application 2003/0004914, filed March 2, 2001 and published January 2, 2003.

In statements of great length, Applicants argued that the cited Bode reference failed to teach or suggest the subject matter or its equivalents of **classifying, based on a comparison of at least one second set of context data (generated based on a version of a query in which an identified potential stopword has been removed) to**

**a first set of context data (generated based on the query), the potential stopword either as an actual stopword or a non-stopword; and comparison of at least one second set of context data (generated based on a version of a query in which an identified potential stopword has been removed) to a first set of context data (generated based on the query), the potential stopword either as an actual stopword or a non-stopword, and further argued that McGreevy fails to suggest or teach identifying stopwords in a query, much less discloses or suggests classifying, based on a comparison of at least one second set of context data (generated based on a version of a query in which an identified potential stopword has been removed) to a first set of context data (generated based on the query), the potential stopword either as an actual stopword or a non-stopword, as required and described in each of the independent claims 1, 11, 21, 27 and 30-32.**

Applicants further submitted that independent claims 1, 11, 21, 27 and 30-32, as amended or newly added, and all claims depending therefrom, are not fairly disclosed by the cited sections of Bode and McGreevy and are in condition for allowance.

Based on the above argument, consideration of the detailed subject matter described in each of independent claims 1, 11, 21, 27 and 30-32 as most currently amended, and further review of the prior art cited or considered, and an Examiner's Amendments which removes identified stopwords and rewrites query without the identified stopwords

which were identified from potential to become actual stopwords. Examiner is persuaded that the instant Application clearly distinguishes from prior art.

An update search on prior art in domains (EAST, NPL-ACM, Google, NPL-IEEE, etc) has been conducted. The prior art searched and investigated in the domains (EAST, NPL-ACM, Google, NPL-IEEE, etc) do not fairly teach or suggest teaching of the subject matter as described by the combined limitation in each of the independent claims 1, 11, 21, 27 and 30-32.

Claims in the groups (4, 6-10 and 37-38), (15-20), (22-26) and (33-36) are directly or indirectly dependent upon the independent claims 1, 11, 21 and 32, respectively, and are also distinct from the prior arts for the same reason.

After a search and a thorough examination of the present Application and in light of the prior arts, **Claims 1, 4, 6-11, 15-21, 23-27, 30-32 and 34-38 (renumbered to 1-28) are allowed.**

### ***Conclusions***

5. Any comments considered necessary by Applicants must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance".

### ***Contact Information***

6. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Kuen S. Lu whose telephone number is (571) 272-4114. The examiner can normally be reached on Monday-Friday (8:00 am-5:00 pm). If attempts to reach the examiner by telephone are unsuccessful, the examiner's Supervisor, John Cottingham can be reached on (571) 272-7079. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for Page 13 published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR System, contact the Electronic Business Center (EBC) at 866-279-2197 (toll free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, please call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Art Unit 2167

March 14, 2008

Kuen S. Lu, Primary Patent Examiner

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